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BRIDGE AND TRANSIT SERVICE COSTS AND REVENUES
An Analysis of Deficit Allocation Based On Benefits Received

Prepared for

GOLDEN GATE BRIDGE HIGHWAY AND TRANSPORTATION DISTRICT

Richard J. Smart
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BRIDGE AND TRANSIT SERVICE COSTS AND REVENUES
An Analysis of Deficit Allocation Based On Benefits Received

1. INTRODUCTION

A. Purpose of the Study

The Golden Gate Bridge, Highway and Transportation District has commissioned this study to assist it in determining an equitable basis for allocating the projected unfunded costs of bridge and transit system operations among users, based on an analysis of the distribution of benefits received by residents of the primary geographical areas being served. The need for such an analysis has been occasioned by unexpectedly high bus and ferry operating costs, as well as projected costs of Bridge operations and capital improvements. Given a perceived inability to raise transit fares in amounts sufficient to offset actual and projected transit operating deficits, without causing unacceptable numbers of commuters to abandon transit and return to private automobile use, additional revenues are required in order to maintain a financially sound position.

During the period in which this study has been conducted, the District has had under consideration a number of alternative fare and toll structures to provide sufficient revenues to meet projected costs. It should be emphasized that this study does not recommend any particular toll/fare alternative or consider the merits of any such alternative. Nor does the study address, or have any effect upon, the conclusions of the District's environmental impact report dealing with toll and fare increases. Rather, the study focuses on an equity-based methodology for allocating transit deficits among

the counties primarily benefited by the bus and ferry transit system, and for allocating credits to those counties against their deficits based on funds paid by them and their residents to the District, including surplus Bridge tolls. The toll contribution technique is applied to the five alternative toll/fare structures designed by District staff, in its preliminary financial projections, and is applicable to any hypothetical future mix of tolls and fares. In addition, the study is concerned with long-term financial requirements over and above those considered in the preliminary financial projections.

B. District Financial Condition

At the time the bus and ferry system was planned, it was assumed that District reserves would be used to fund the District's share of Federal capital grants. Hence, it was anticipated that a substantial reduction in District reserves would result from implementation. However, it also was initially anticipated that bus and ferry operating deficits would be funded principally out of the annual surplus from bridge tolls--i.e. bridge revenues over and above the amounts needed to maintain and operate the Bridge and to fund future capital improvements. Due to extremely high levels of general inflation, which have continued to raise both the capital and operating costs of all District divisions, expansion of the bus system in response to growing demand, unexpectedly high costs of ferry terminal development apart from inflation, and ferry ridership at a lower level than projected, that expectation has not been met.

Consequently, District reserves have been in an overall trend of decline over the past five years. The reduction in reserves has continued despite an earlier 50% raise in Bridge tolls. Mindful of

its established priority for operation and maintenance of the Bridge, yet aware that--without new revenues--there could continue to be a call on reserves for unfunded transit costs, the Board of Directors has established a policy of minimum reserves--i.e. an amount below which reserves cannot legally fall without Board action to lower the limitation.

However, over the past several years the minimum reserve policy itself has fallen victim to the relentless rise of costs, on the one hand, and the political impediments to generating additional revenues on the other. Since implementation of the transit systems, the minimum reserve has been lowered twice to accomodate a need for additional transit funding. Hence, with the exception of the earlier and, as is now clear, inadequate toll raise, the developing financial problem has not been met with decisions which would cure the underlying and continuing deficit--i.e. an increase in revenues or a reduction of costs, or a combination thereof. Rather, the response has been to periodically increase the amount the District can spend through a policy of minimum reserve reduction. That policy, while a short term expedient permitting the avoidance of political pain, contributes nothing whatever to the District's financial statement. At the same time, it encourages recurrent deferral of meaningful remedial actions.

Efforts have been made to attack the underlying problem, but they have not carried at the Board level. Staff reports have been explicit in demonstrating the need for either increased revenues or reduced transit service if reserve depletion is to be avoided. In 1976, the Finance Committee recommended a toll and fare increase, which was rejected by a one vote majority of the Board. In 1977, the Board enacted a policy requiring that $1 million, above the exist-

*

ing minimum reserve, would be put in a reserve account for Bridge deck repairs. While this policy reflects fiscal prudence, it is just that--a policy. It does not create the additional revenues required to fund the added reserve, let alone the revenues required even to fund the preexisting minimum reserve.

The seriousness of the District's financial prospects is exacerbated by the probability, according to engineering consultants, that redecking of the Bridge will be required in the mid-term future. While the timing of such work is uncertain, and no reliable cost estimates exist, a minimum figure of $40 million has been suggested. But even without consideration of this complicating, and uncertain, factor, and without including reserves in the financial projections sufficient to cover such an expenditure, present revenues are insufficient for the District to operate through the current fiscal year without further reduction of the minimum reserve requirement.

In this context, the District is now considering a number of toll/fare alternatives designed to generate additional revenues. As noted above, while it is not the function of this study to recommend any such alternatives, the study does consider the relationship between the alternatives and an equity-based allocation of the transit deficit among the various counties. The study also considers additional sources of revenue that may be required quite apart from the toll/fare alternatives.

Reference was made above to the need for politically painful decisions. The nature of those decisions is plain. There are only two general categories of solution available (apart from a further reduction in minimum reserves, which is not a solution at all, but a deferral of a solution):

--Action to increase revenues; or

--Action to reduce transit system costs; or

--A combination of both.

Regarding transit service cost reduction, several points need to be considered. Costs can be reduced in two ways. First, greater efficiencies in operation can be achieved. Second, services can be cut. As to the first, the notion that inefficient management of the District's transit services is responsible for deterioration of its financial condition has been suggested occasionally by those opposed to measures to generate additional revenue. In a time of increasing demand for public services, coupled with high resistance among the public to payment for the increased cost of those services, the accusation of inefficiency in public agencies is convenient, popular and politically appealing. It also is often--as is believed to be the case here--a red herring which merely obscures the need to address the real problem: generation of revenues adequate to pay the full cost of public services. It is easy for public officials to implement public services. It is more difficult for them to impose upon their constituencies--already burdened with mounting public costs--additional charges (whether through tolls, fares and/or taxes) required by a continually inflating economy. An easy obfuscation is to attribute the gap between costs and revenues to "inefficiency."

Undoubtedly, any agency can become more efficient. However, in the District's case, the magnitude of the transit deficit is such that it is impossible for a serious analyst to believe that adherence to the most rigorous efficiency or productivity standards would, by itself, cure the existing and projected deficits.

Insofar as the bus system is concerned, the ratio of fare box

revenues to operating costs is well above the national average. A/C Transit, long considered one of the most efficient operations in the country, is protesting the new legislative condition placed on additional financial assistance that it pay 35% of its costs through the fare box. The District currently is paying 43% of bus operating costs through the fare box.

That, however, is not the complete answer. Critics of District "runaway costs," tend to focus on the ferry system as evidence of District inefficiency and financial mismanagement. It is plausible to argue that, because of its large capital costs, the ferry system should not have been developed, or should have been developed on a smaller scale, because its size may be greater than justified by actual patronage figures. Since the third new ferry is not yet in service, and its impact cannot yet be measured, and because of recent "down time" problems with other vessels, which tends, at least in the short run, to impair system credibility in the commuter marketplace, the long-range validity of such arguments is speculative. However, several points already are clear. Although the capital costs of the ferry system are substantial, and the ultimate costs of terminal construction greatly exceeded construction estimates, those expenditures have already been made or obligated. For all practical purposes, the District's projected unacceptable financial condition, at this point, is related wholly to future operating costs of both systems as measured against the District's current revenue structure. It is clear that, on an overall cost basis, the ferry system would surpass the bus system in cost effectiveness if patronage projections could be realized. This is due principally to two factors, the longer useful life of the ferries and the fact that the ferry operation is much less labor intensive.

Whether ferry patronage can be developed to the point where the system's inherent cost effectiveness can be realized is an open question. Development of a high level of habitual commuter ridership depends upon maintenance of schedules, which in turn depends upon vessel reliability. This report does not deal with solutions to technical problems which recently have caused deterioration in levels of service. Rather, it assumes that the technical problems will solved. If that is in fact the case, there remains a broader question: Assuming a reliable system, can patronage be increased to the projected levels upon which system financial planning was based?

It is submitted that that question cannot be answered until the system is in full operation, and--of greatest importance--until an adequate marketing program is undertaken to develop ridership. To date, that has not occurred. It is important to be clear about what is meant by marketing. While advertising, public relations and incentives are part of a marketing program, by themselves they do not comprise a sophisticated marketing effort, however high their creative quality.

The District is involved in an effort not only to divert automobile users to public transit, which, on the whole, it has done very successfully; rather, it also is involved in an effort to divert a large portion of commuters to water transit, a mode which, at least in recent years, has been regarded as unconventional. Development of the potential market for water transit requires a highly sophisticated effort to ascertain the demographics of those who are in it, their locations and their needs, and subsequent design of a public information program specifically focused on that segment of the larger transit market. Hence, in considering alternative approaches to creating equal-

ity between ferry costs and revenues, the Board should consider adequate funding of a market analysis and derivative marketing program.

All this having been said, however, it must be emphasized that, even if the ferry patronage projections are realized, the District must generate additional revenues unless transit services are to be cut. The financial projections upon which the Board is basing its deliberations regarding a toll/fare raise assume the ferry patronage projections, not the patronage that in fact is being realized. Hence, even if the projections are met in the future, additional revenues are required. Moreover, in all of the controversy that has surrounded the ferry system, sight should not be lost of the fact that, while projected ferry operating deficits range from $3.5 million in fiscal 1977-78 to $5 million in fiscal 1981-82, bus deficits from $9.5 million to $13.2 million during the same period.

In any case, both systems are in place. Which brings this discussion back to the second way of reducing costs mentioned above; namely, reduction of services. The Board should clearly understand that the only realistic alternative to the generation of additional revenues is a sharp reduction in transit services (whether bus services, ferry services, or a combination thereof.)

The choice between service reduction and new revenue generation, as alternative ways to narrow the gap between operating losses and funds available for operating subsidies, is much more than simply a choice between competing approaches to financial management. It involves basic policy decisions regarding the District's commitment to its fundamental transit goals.

Four explicit policies are at issue. The first is the policy that, by 1980, 50% of the people traveling from Marin County to San

Francisco during the morning peak period should be carried by public transportation. The second is the policy that growth in morning peak period travel should be achieved through transit rather than through private vehicles. The third is the policy that automobile users, through bridge tolls, will subsidize the costs of transit. The fourth is the policy that, ideally, the various geographical areas served by a transit system should pay the costs of the service in proportion to the benefits received.

The first and second policies, relating to transit patronage objectives, is uncontroversial, assuming it can be achieved with financial responsibility.

The third policy, relating to subsidization of transit by automobile tolls, has always been controversial (the latest example being the controversy resulting from the Metropolitan Transportation Commission's raising of tolls on other Bay bridges to subsidize transit). Nonetheless, controversial or not, it *is* the policy. It is no longer unique, and as time passes it likely will not even be regarded as unusual.

The fourth policy, distributing the burden of transit costs among geographical areas according to the benefits received by those areas, is--on the face of it--equitable and uncontroversial. However, as will be shown subsequently in this report, it is a policy that has not in fact been implemented in respect to those transit services in which the major unfunded deficits occur.

The decisions facing the District's Board necessarily will revolve around these four policies. The threshhold question is: Will the District reaffirm its basic transit objectives? If so, the financial extension of that decision will be a decision to raise additional

revenues rather than to reduce costs through reduction of services. That second decision requires a determination of the amounts and sources of new revenues required, particularly the mix to be sought between bridge tolls, transit fares, and possible other sources of revenue. That decision in turn should be made in the context of the fourth policy: All costs should be allocated on the basis of the distribution of benefits among the geographical areas served.

On the other hand, should the District decide not to generate additional revenues, its only realistic option (apart from the stopgap measure of reducing minimum reserves) is a reduction of service. In that event, the fourth policy should be implemented. That is, transit service should be proportionately reduced to the various counties served as measured by the difference between benefits received by a particular area and the unfunded deficit incurred in rendering service to that area. A detailed analysis of this approach appears subsequently in this report.

Finally, it should be noted that the bus portion of the analysis which follows is concerned exclusively with service on transbay buses. As the bus deficit has increased over the years, Board discussion often has centered on the Marin purchase of services contract, on the mistaken assumption that the gap between expenses and revenues in the bus system is due to Marin's failure to pay the true cost of local service. Suggestions have been made that the so-called "Marin Formula" either is defective in concept, or is manipulated in its application, so as to favor Marin County. There is no evidence that such is the case. To the contrary, the Marin County local service is the only roughly "break even" service in the system.

Consequently, suggestions that the transit deficit problem can

be solved by getting Marin to pay the "full cost" of local service or, alternatively, by cutting or terminating the service, miss the point. Termination of the Marin contract would have no significant effect in reducing the deficit because nearly all of the deficit is in inter-county service on transbay routes.

The fundamental source of this problem is in the legislation authorizing the District to operate a transit system. That legislation requires the District to charge the counties for transit benefits realized for intra-county service. It does not, however, require a charge to the counties for transbay service. Hence, all negotiations with the counties from inception of the service, and all resulting purchase of services contracts, have proceeded on the assumption that it is the counties' responsibility to pay for intra-county service and the District's responsibility to pay for transbay service, with the net deficit for the latter service to be covered by bridge tolls.

Tolls have been inadequate. Therefore, elimination of the District's net deficit must focus on steps to be taken in regard to transbay service, whether through generation of additional revenues or cuts in service. The key point is that it is transbay service that must be cut if service reductions are required.

II. EXECUTIVE SUMMARY

This section summarizes the principal conclusions of the study, the bases for which are set forth in detail subsequently in this report.

A. Transit services cannot be maintained at their present levels without additional revenues.

B. In principle, all transit deficits should be funded by those who receive the benefits of the service.

C. The costs of the Marin local service are very close to fully paid under the purchase of services contract.

D. It is estimated that 96% of the bus operating deficit occurs on transbay routes.

E. The present benefits formula, which charges the counties served for intra-county service, but not for inter-county service is irrational. Riders from each of those counties are benefited as much in utilizing inter-county service as they are in utilizing intra-county service. The counties to which transbay (including ferry) service is provided--Marin, Sonoma and San Francisco--should each fund a percentage of the transbay deficit which reflects the volume of service used by residents of each county.

F. Since the transbay deficit is partially funded by bridge tolls, each county should receive a proportionate credit based on a formula which considers the percentage of total Bridge tolls paid by residents of such counties.

III. COUNTY PAYMENTS FOR TRANSBAY BENEFITS

As noted in the Executive Summary, the existing arrangement, under which the counties served by the transit service are charged only for the operating deficit resulting from intra-county service is irrational. This means that, apart from the allocations of TDA and Federal Operating Assistance funds, the counties pay nothing toward the transbay bus operating deficit or the ferry operating deficit.

This situation seems particularly inappropriate because, on a passenger miles basis, benefits conferred on residents of the counties served are far greater for transbay service than for intra-county service, and the deficits incurred are much larger. The genesis for this arrangement consists of early Board resolutions and the state legislation authorizing the District to implement a transportation system. The latter provided in part:

> "...the board of directors shall determine:
> The amount which the counties, and the transit districts therein, served by the bus transit or water transportation system operated by the district, shall contribute to the operation of such a system for benefits derived from intra-county operation connected with or related to such a system. The method of computing and receiving such amount shall be the method provided for in the district's Resolution No. 7030, adopted May 8, 1970."

Resolution 7030 provided:

> "(a) Any trip originating in one county and terminating in another, regardless of the mode of transportation used, if such travel is on a system planned and operated by the Bridge District or its contractees, shall be classified as an inter-county trip, and shall be the responsibility of the Bridge District;
>
> "(b) To the extent that service is provided by equipment of the District or its contractees for trips originating and terminating within one county, such service shall be regarded as a benefit to said county and the cost of such service shall be borne by that county;"

The financial assumptions underlying this division of responsibility for intra-county and transbay costs proved to be erroneous. However, even had tolls proved adequate to fund transbay operating deficits, and even were additional revenues not now required, it would be desirable annually to account for the shares of the deficit attributable to each county. Illustrative results of such an approach are set forth subsequently in this report for each of the five toll/fare alternatives shown in the District's preliminary financial projections.

There are two potential uses for such an analysis. First, it can be useful simply for internal District planning and policy making purposes. Much of the debate regarding transit costs in recent years has focused on the question of whether the various constituencies served are paying into the District, whether through tolls or fares, shares of costs fairly proportionate to services received.

Second, it is possible that, in the long term, even a raise in tolls and fares will not be adequate to cover constantly inflating costs. This possibility becomes a near certainty if Bridge redecking becomes a reality. Hence, it may be necessary in the future to generate additional revenues outside of the toll/fare structure. In that eventuality, such an annual analysis of benefits received against costs paid by the counties can provide the basis for determining the revenues that must be provided by each county if it is to continue to receive the desired levels of service.

Whether the District ultimately uses such a methodology only for internal analytical purposes, or whether it uses it in the long term for determining additional amounts required from the counties

outside of the toll/fare structure, one thing is clear from its application to the present financial projections: The costs of the bus and ferry transit systems are not equitably allocated among the counties as measured against benefits received. Should the District determine in the future that additional revenues are required, there appears to be no persuasive reason why the District should not charge the counties for the transbay deficit on a benefits basis, just as it charges them for local service on a benefits basis.

The District's legislation, quoted above, does not appear to present a legal impediment to such an approach. While the legislation requires that the District charge the counties for intra-county benefits, it does not, on its face, preclude such charges for transbay service. Of course, the District has no legal mechanism for unilaterally compelling such payments. But, should it prove necessary, there appears to be nothing to preclude the District from cutting transbay service to areas which cannot, or which are unwilling, to pay the unfunded transit costs which remain after application of surplus tolls.

Given the high degree of public concern which already exists regarding the need for an increase in the toll/fare structure, any discussion of a potential future need for revenues outside of fares and tolls is bound to meet heavy political resistance. However, it should be noted that the District is the only major operator in the Bay area which is not supported either by a District tax, as is the case with operators serving more than one political jurisdiction, or by general fund revenues, as is the case with Muni.

At an earlier time, a response to that observation could have been that the District did not need access either to County tax funds for transbay transit, or to a District tax, because Bridge tolls were a substitute for taxes. However, the other transbay operators, victimized by inflation along with all other government agencies, now have access to bay toll revenues as well as their basic tax funds.

Finally, in terms of capacity to pay, it should be noted that the percentages of total government expenditures that are made for transit in Marin and Sonoma Counties, including Bridge tolls, are far smaller than in other Bay Area counties. The comparisons are shown subsequently in this report.

IV. FINANCIAL ANALYSIS

This section is based on the assumption that at least for internal planning and accounting purposes--and potentially for the purpose of fairly allocating to the counties financial responsibility for possible future transbay bus and ferry deficits--it is essential to know the relationship between benefits received by the counties and costs which they in fact pay. For illustrative purposes, the analysis is made in reference to each of the five alternative toll/fare structures originally suggested in the District's preliminary financial projections.

A. General Methodology

In general outline, the following methodology has been used:

1. The transbay bus and ferry portions of the total operating deficit were determined. It is estimated that 96% of the unfunded bus deficit occurs in inter-county, as opposed to intra-county service. One hundred percent of the ferry deficit occurs in inter-county service.

2. The percentages of the transbay bus and ferry deficits allocable to San Francisco, Marin and Sonoma counties were determined, based on the percentages of patronage generated by residents of each county. Patronage of persons residing in areas other than the three counties was allocated to the three counties based on their proportionate shares. The data was generated through comprehensive surveys of both systems designed specifically for this study. For the bus system, each county share was determined by passenger miles. For the ferry system, the criterion was passengers.

3. The deficits attributable to the three counties were credited by the amounts of surplus bridge tolls contributed by each county. These amounts were determined by a series of license plate counts at the toll plaza. The percentages of vehicles from the various counties were applied to surplus revenues (amounts above those required for operation and maintenance of the Bridge.

4. The TDA and UMTA Section 5 operating assistance funds contributed by each county for transbay service were credited.

5. The above calculations resulted in a net deficit figure for each county primarily served by the systems.

6. The above calculations were applied to each of the five alternative toll/fare structures shown in the District's preliminary financial projections to show the estimated relationship between the benefit distribution among the counties and their payments toward system costs. It should be noted, however, that since it was desirable to show the true operating deficit, depreciation was included in the operating deficit calculations. In the financial projections a reserve is shown for depreciation; hence depreciation is not reflected in the bus and ferry transit operations projections. Consequently, the net deficit figures shown in the projections which follow would be reduced by the annual amounts of depreciation that are in funded reserves.

B. Bus Patronage Survey

Since no earlier bus patronage survey had determined the counties of residence of inter-county bus passengers, a survey was designed in conjunction with staff for the purpose of this study.

Between Friday, July 29 and Thursday, August 11, 1977, questionnaires were completed by passengers on 117 bus trips. In all cases, one surveyor rode the entire length of the trip asking almost all passengers to complete questionnaires. All members of groups were encouraged to participate as were literate children, elders and tourists. However, passengers were not asked to fill out a second questionnaire on later trips.

While an attempt was made to survey an equal sample from all routes and time periods, passenger response varied by route and time period; commuters were generally most cooperative, while passengers on evening basic service were least cooperative. Therefore, responses from each time period were weighted to represent gross patronage as experienced in June 1977.

To date, three pieces of information have been developed from the completed questionnaires: 1) the counties of residence of revenue passengers for each of the six trip types (Sonoma Local, Marin Local, San Francisco Local, Sonoma-Marin, Sonoma-San Francisco, Marin-San Francisco); 2) the average journey length (total trip length from the stop at which the first GGT bus was boarded to the stop at which the trip on GGT ended) for passengers residing in each county for each of the 6 trip types; and 3) annualized passenger miles.

Counties of Residence of Revenue Passengers

The first question asked on the questionnaire was "Where do you live? (County) ________________". The third question asked respondents to identify the bus stops where their trip began and ended; this was used to identify the trip type which was then coded on each questionnaire. Trip types were validated by question 2 which asked how much fare was paid.

Because the sample size varied from one time period to the next in terms of the number of trips surveyed, and because passengers' response rate also varied by time period, responses were weighted to represent gross patronage, by time period, in June 1977. that is, six matrices were developed, one for each time period (A.M. Off-Peak, A.M. Peak, Midday, P.M. Peak, P.M. Off-Peak, and Weekend) showing the number of responses from each county for each trip type. Each matrix was then adjusted to represent the average daily revenue patronage in June 1977 (weekends included in "average daily").

This adjustment or weighting was accomplished by multiplying the number of responses (from a given county of residence, traveling a given trip type during a given time period) by the gross average daily patronage (for that trip type and that time period) and dividing by the number of responses (for that trip type and time period). That number was then adjusted to revenue passengers by multiplying it by the fraction of revenue passengers for that trip type and time period. The fraction of revenue passengers was determined by the response to question 2; those boarding with transfers and passes being counted as non-revenue passengers.

The six matrices were added together to represent the whole average day on one matrix which was then multipled by 30 to represent total revenue patronage in June. Finally, the June matrix was annualized, taking into account June's average proportion of annual patronage from 1973, 1974 and 1975. This final matrix follows:

Table 1

ANNUALIZED REVENUE PATRONAGE BY COUNTY OF RESIDENCE AND TRIP TYPE

		TRIP TYPE						
RESIDENCE		Sonoma Local	Marin Local	San Francisco Local	Sonoma/ Marin	Sonoma/ San Francisco	Marin/ San Francisco	Total
Marin	#	4,522	2,357,803	35,422	21,479	26,755	3,752,814	6,198,795
	%	0.05	25.54	0.38	0.23	0.29	40.66	67.15
San Francisco	#	1,130	17,334	15,073	0	63,684	591,994	689,215
	%	0.01	0.18	0.16	0.00	0.69	6.41	7.47
Sonoma	#	351,956	43,712	0	75,742	910,789	38,436	1,420,635
	%	3.81	0.47	0.00	0.82	9.87	0.42	15.39
Other	#	41,828	260,387	39,190	16,204	133,397	430,713	921,719
	%	0.45	2.82	0.42	0.18	1.45	4.67	9.99
Total	#	399,436	2,679,236	89,685	113,425	1,134,625	4,813,957	9,230,364
	%	4.33	29.03	0.97	1.23	12.29	52.15	100.00

Average Journey Length by County of Residence and Trip Type

Golden Gate transit's service area has been divided into 78 "analysis zones" and a matrix showing the average mileage from each zone to each other zone has been developed. Surveyors coded the questionnaires with the zones in which the respondent got on and off the bus. This information was used to develop average trip lengths for each route. Another set of zone numbers, based on question #3, was coded on each questionnaire showing the beginning and ending points of the passenger's total trip on GGT (journey length as opposed to trip length).

As with the county of residence analysis, the results of the average journey length study were weighted to account for variations in the sample size from one time period to the next.

Again six matrices were developed, one for each time period showing the average journey length by county of residence and by trip type. The average journey length (for a given county of residence, with a given trip type, during a given time period) was multiplied by the average daily gross patronage (for that time period and trip type). The sum of these products for all time periods was then divided by the average daily gross patronage for all time periods for which there were responses.

The result of this calculation is the following matrix of average journey lengths by county of residence and by trip type.

Table 3

AVERAGE JOURNEY LENGTH (in miles) BY RESIDENCE AND TRIP TYPE

	TRIP TYPE						
RESIDENCE	Sonoma Local	Marin Local	San Francisco Local	Sonoma/ Marin	Sonoma/ San Francisco	Marin San Francisco	Total
Marin	11.720	7.079	5.169	29.746	49.776	18.824	14.445
San Francisco	2.200	5.259	5.374	*	52.147	13.633	16.782
Sonoma	11.847	16.847	*	29.258	49.890	31.726	34.403
Other	9.553	6.139	6.400	29.343	52.845	15.764	15.802
Average - weighted	11.597	7.135	5.741	29.363	50.361	18.015	16.003

*There were no responses in these categories

Annualized Passenger Miles

The average journey length totals for each trip type and for each county of residence were also weighted. The average journey length was multiplied by the corresponding number of revenue passengers to yield the following table of Annualized Passenger Miles by county of residence and by trip type. The total passenger miles for each county of residence and for each trip type were then divided by the corresponding total number of revenue passengers to yield the appropriate total average journey lengths.

Table 2

ANNUALIZED PASSENGER MILES RESIDENCE AND TRIP TYPE FOR INTERCOUNTY AND SAN FRANCISCO LOCAL

TRIP TYPE	San Francisco Local	Sonoma Marin	Sonoma San Francisco	Marin San Francisco	Total For Inter-county and San Francisco Local
RESIDENCE					
Marin	183,096	638,914	1,331,757	70,642,971	72,796,738
% of intercounty & San Francisco Local	0.12	0.43	0.90	47.83	49.28
San Francisco	81,002	0	3,320,930	8,070,654	11,472,586
% of intercounty & San Francisco Local	0.06	0.00	2.25	5.46	7.77
Sonoma	0	2,216,059	45,439,263	1,219,421	48,874,743
% of intercounty & San Francisco Local	0.00	1.50	30.76	0.83	33.09
Other	250,816	475,474	7,049,364	6,789,760	14,565,414
% of intercounty & San Francisco Local	0.17	0.32	4.77	4.60	9.86
Total	514,914	3,330,447	57,141,314	86,722,806	147,709,481
% of intercounty & San Francisco Local	0.35	2.25	38.68	58.72	100.00

C. Ferry Patronage Survey

This section presents the results of Larkspur and Sausalito ferry patronage surveys. It should be noted that, because of the timing of this study, it was not possible to have conducted a non-summer survey of Sausalito patronage for incorporation in the results. Hence, the results of the Sausalito survey do not account for season variation in counties of residence and the survey is not representative of year round patterns. However, the relative shares of ridership of Marin and San Francisco residents may remain fairly constant throughout the year. Since ridership from other areas is allocated proportionately to those two counties, seasonal variation may not materially affect their respective shares of the overall deficit. In any event, further surveys of Sausalito patronage should be conducted during non-summer months and the results adjusted accordingly.

The table below shows the percentages of passengers from each county during each time period, based on the July, 1977, survey.

Table 4

COUNTIES OF RESIDENCE OF LARKSPUR FERRY PASSENGERS-JULY 1977

			Marin	San Francisco	Sonoma	Other California	Out of State	Total	Sample Size 3
A.M. Peak[1]	Thursday	7-21	93.4	0.5	0.9	1.5	3.6	99.9	775
	Friday	7-22	82.6	1.0	4.5	1.0	10.8	99.9	228
	Average		90.5	0.7	1.9	1.4	5.6	100.1	1063
P.M. Peak[2]	Thursday	7-21	78.3	2.9	2.9	8.2	7.8	100.1	244
	Friday	7-22	77.9	5.0	2.2	5.0	9.9	100.0	181
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	Average		48.5	6.9	5.6	19.6	19.4	100.0	1629
Week-end	Saturday	7-23	37.4	11.9	5.4	22.4	23.0	100.1	875
	Sunday	7-24	36.6	14.6	6.6	26.7	15.5	100.0	618
	Average		37.0	13.0	5.9	24.2	19.9	100.0	1493

(1) Includes first five southbound trips.
(2) Includes northbound trips leaving San Francisco at 3:50, 4:45, 5:20 and 6:15.
(3) "Sample Size" indicates the number of responses to the residence question -- the actual number of questionnaires completed is larger

In distributing questionnaries on the Larkspur Ferries almost all passengers were approached. All members of groups were encouraged to participate as were literate childred, elders and tourists. However, passengers were not asked to fill out a second questionnaire on later trips. Response was excellent.

If the July survey's residence distribution is taken to represent the three summer months and the February and March distribution to represent the other nine months, and percentages for all time periods are multiplied by their respective estimated patronage, the following distribution results:

Table 5

ANTICIPATED SUMMER PATRONAGE - LARKSPUR FERRY

JUNE-AUGUST (based on July survey)		Marin	San Francisco	Sonoma	Other California	Out of State	Total
A.M. Peak	% from survey	90.5	0.7	1.9	1.4	5.6	100.1
	% x projected patronage	89,142	690	1,872	1,379	5,516	98,599
P.M. Peak	% from survey	78.1	3.8	2.6	6.8	8.7	100.0
	% x projected patronage	82,396	4,009	2,743	7,174	9,178	105,500
Off-Peak	% from survey	48.5	6.9	5.6	19.6	19.4	100.0
	% x projected patronage	113,631	16,166	13,120	45,921	45,452	234,290
Week-end	% from survey	37.0	13.0	5.9	24.2	19.9	100.0
	% x projected patronage	51,615	18,135	8,230	33,759	27,760	139,499
Summer Total	sum of projected patronage	336,784	39,000	25,965	88,233	87,906	527,888
	%	58.3	6.7	4.5	15.3	15.2	100.0

Table 6

ANTICIPATED WINTER PATRONAGE-LARKSPUR FERRY

SEPTEMBER-MAY (based on February and March surveys)		Marin	San Francisco	Sonoma	Other California	Out of State	Total
A.M. Peak	% from survey	98.0	0.0	1.1	0.5	0.4	100.0
	% x projected patronage	325,928	-	3,658	1,663	1,330	332,579
P.M.	% from survey	98.7	0.65	0.0	0.0	0.65	100.0
	% x projected patronage	347,394	2,288	-	-	2,288	351,970
Off-Peak	% from survey	59.7	14.9	3.6	14.1	7.7	100.0
	% x projected patronage	201,123	50,197	12,128	47,500	25,941	336,889
Week-End	% from survey	54.0	17.5	4.2	21.7	2.6	100.0
	% x projected patronage	211,302	68,478	16,435	84,912	10,174	391,301
Winter Total	sum of projected patronage	1,085,747	120,963	32,221	134,075	39,733	1,412,739
	%	76.9	8.6	2.3	9.5	2.8	100.1

Table 7

ANTICIPATED ANNUAL PATRONAGE--LARKSPUR FERRY

		Marin	San Francisco	Sonoma	Other California	Out of State	Total
Annual Total	sum of projected patronage	1,422,531	159,963	58,186	222,308	127,639	1,990,627
	%	71.5	8.0	2.9	11.2	6.4	100.0

The variation in Marin's proportion from winter to summer may not be entirely seasonal; it is likely that many local residents, having prior knowledge of the new ferry system, were the first to take pleasure rides.

revenues rather than to reduce costs through reduction of services. That second decision requires a determination of the amounts and sources of new revenues required, particularly the mix to be sought between bridge tolls, transit fares, and possible other sources of revenue. That decision in turn should be made in the context of the fourth policy: All costs should be allocated on the basis of the distribution of benefits among the geographical areas served.

On the other hand, should the District decide not to generate additional revenues, its only realistic option (apart from the stopgap measure of reducing minimum reserves) is a reduction of service. In that event, the fourth policy should be implemented. That is, transit service should be proportionately reduced to the various counties served as measured by the difference between benefits received by a particular area and the unfunded deficit incurred in rendering service to that area. A detailed analysis of this approach appears subsequently in this report.

Finally, it should be noted that the bus portion of the analysis which follows is concerned exclusively with service on transbay buses. As the bus deficit has increased over the years, Board discussion often has centered on the Marin purchase of services contract, on the mistaken assumption that the gap between expenses and revenues in the bus system is due to Marin's failure to pay the true cost of local service. Suggestions have been made that the so-called "Marin Formula" either is defective in concept, or is manipulated in its application, so as to favor Marin County. There is no evidence that such is the case. To the contrary, the Marin County local service is the only roughly "break even" service in the system.

Consequently, suggestions that the transit deficit problem can

be solved by getting Marin to pay the "full cost" of local service or, alternatively, by cutting or terminating the service, miss the point. Termination of the Marin contract would have no significant effect in reducing the deficit because nearly all of the deficit is in inter-county service on transbay routes.

The fundamental source of this problem is in the legislation authorizing the District to operate a transit system. That legislation requires the District to charge the counties for transit benefits realized for intra-county service. It does not, however, require a charge to the counties for transbay service. Hence, all negotiations with the counties from inception of the service, and all resulting purchase of services contracts, have proceeded on the assumption that it is the counties' responsibility to pay for intra-county service and the District's responsibility to pay for transbay service, with the net deficit for the latter service to be covered by bridge tolls.

Tolls have been inadequate. Therefore, elimination of the District's net deficit must focus on steps to be taken in regard to transbay service, whether through generation of additional revenues or cuts in service. The key point is that it is transbay service that must be cut if service reductions are required.

II. EXECUTIVE SUMMARY

This section summarizes the principal conclusions of the study, the bases for which are set forth in detail subsequently in this report.

A. Transit services cannot be maintained at their present levels without additional revenues.

B. In principle, all transit deficits should be funded by those who receive the benefits of the service.

C. The costs of the Marin local service are very close to fully paid under the purchase of services contract.

D. It is estimated that 96% of the bus operating deficit occurs on transbay routes.

E. The present benefits formula, which charges the counties served for intra-county service, but not for inter-county service is irrational. Riders from each of those counties are benefited as much in utilizing inter-county service as they are in utilizing intra-county service. The counties to which transbay (including ferry) service is provided--Marin, Sonoma and San Francisco--should each fund a percentage of the transbay deficit which reflects the volume of service used by residents of each county.

F. Since the transbay deficit is partially funded by bridge tolls, each county should receive a proportionate credit based on a formula which considers the percentage of total Bridge tolls paid by residents of such counties.

III. COUNTY PAYMENTS FOR TRANSBAY BENEFITS

As noted in the Executive Summary, the existing arrangement, under which the counties served by the transit service are charged only for the operating deficit resulting from intra-county service is irrational. This means that, apart from the allocations of TDA and Federal Operating Assistance funds, the counties pay nothing toward the transbay bus operating deficit or the ferry operating deficit.

This situation seems particularly inappropriate because, on a passenger miles basis, benefits conferred on residents of the counties served are far greater for transbay service than for intra-county service, and the deficits incurred are much larger. The genesis for this arrangement consists of early Board resolutions and the state legislation authorizing the District to implement a transportation system. The latter provided in part:

> "...the board of directors shall determine:
> The amount which the counties, and the transit districts therein, served by the bus transit or water transportation system operated by the district, shall contribute to the operation of such a system for benefits derived from intra-county operation connected with or related to such a system. The method of computing and receiving such amount shall be the method provided for in the district's Resolution No. 7030, adopted May 8, 1970."

Resolution 7030 provided:

> "(a) Any trip originating in one county and terminating in another, regardless of the mode of transportation used, if such travel is on a system planned and operated by the Bridge District or its contractees, shall be classified as an inter-county trip, and shall be the responsibility of the Bridge District;
>
> "(b) To the extent that service is provided by equipment of the District or its contractees for trips originating and terminating within one county, such service shall be regarded as a benefit to said county and the cost of such service shall be borne by that county;"

All subsequent negotiations between the District and the counties, and all resulting contracts, have assumed this division of financial responsibility.

A search of the records of the period has failed to disclose the rationale underlying this approach, which has the counties contractually obligated to pay the deficits of intra-county service, but not of inter-county service. Presumably, it was based on the following considerations:

1. The District saw its primary mission as providing regional, transbay transit from counties North of San Francisco into the city, a plan tied conceptually and financially to its operation of the Bridge.

2. It was assumed, based on financial information available at the time, that bridge tolls - above and beyond those required to maintain the Bridge - would be sufficient to fully pay the deficits of transbay bus and ferry transit.

3. Since the counties being served by the transit system are the counties paying the major part of the Bridge tolls, it was assumed that the residents of those counties would in fact be paying the transit operating deficits incurred by the transbay system.

4. The District had not regarded provision of local transportation as part of its responsibility, since such transportation was unrelated conceptually to its preexisting regional transportation role as the operator of the Bridge.

5. Marin and Sonoma Counties wanted local service, and, as an adjunct to the basic service for which it was responsible, the District was willing to provide it if the counties would pay for it.

The financial assumptions underlying this division of responsibility for intra-county and transbay costs proved to be erroneous. However, even had tolls proved adequate to fund transbay operating deficits, and even were additional revenues not now required, it would be desirable annually to account for the shares of the deficit attributable to each county. Illustrative results of such an approach are set forth subsequently in this report for each of the five toll/fare alternatives shown in the District's preliminary financial projections.

There are two potential uses for such an analysis. First, it can be useful simply for internal District planning and policy making purposes. Much of the debate regarding transit costs in recent years has focused on the question of whether the various constituencies served are paying into the District, whether through tolls or fares, shares of costs fairly proportionate to services received.

Second, it is possible that, in the long term, even a raise in tolls and fares will not be adequate to cover constantly inflating costs. This possibility becomes a near certainty if Bridge redecking becomes a reality. Hence, it may be necessary in the future to generate additional revenues outside of the toll/fare structure. In that eventuality, such an annual analysis of benefits received against costs paid by the counties can provide the basis for determining the revenues that must be provided by each county if it is to continue to receive the desired levels of service.

Whether the District ultimately uses such a methodology only for internal analytical purposes, or whether it uses it in the long term for determining additional amounts required from the counties

outside of the toll/fare structure, one thing is clear from its application to the present financial projections: The costs of the bus and ferry transit systems are not equitably allocated among the counties as measured against benefits received. Should the District determine in the future that additional revenues are required, there appears to be no persuasive reason why the District should not charge the counties for the transbay deficit on a benefits basis, just as it charges them for local service on a benefits basis.

The District's legislation, quoted above, does not appear to present a legal impediment to such an approach. While the legislation requires that the District charge the counties for intra-county benefits, it does not, on its face, preclude such charges for transbay service. Of course, the District has no legal mechanism for unilaterally compelling such payments. But, should it prove necessary, there appears to be nothing to preclude the District from cutting transbay service to areas which cannot, or which are unwilling, to pay the unfunded transit costs which remain after application of surplus tolls.

Given the high degree of public concern which already exists regarding the need for an increase in the toll/fare structure, any discussion of a potential future need for revenues outside of fares and tolls is bound to meet heavy political resistance. However, it should be noted that the District is the only major operator in the Bay area which is not supported either by a District tax, as is the case with operators serving more than one political jurisdiction, or by general fund revenues, as is the case with Muni.

At an earlier time, a response to that observation could have been that the District did not need access either to County tax funds for transbay transit, or to a District tax, because Bridge tolls were a substitute for taxes. However, the other transbay operators, victimized by inflation along with all other government agencies, now have access to bay toll revenues as well as their basic tax funds.

Finally, in terms of capacity to pay, it should be noted that the percentages of total government expenditures that are made for transit in Marin and Sonoma Counties, including Bridge tolls, are far smaller than in other Bay Area counties. The comparisons are shown subsequently in this report.

IV. FINANCIAL ANALYSIS

This section is based on the assumption that at least for internal planning and accounting purposes--and potentially for the purpose of fairly allocating to the counties financial responsibility for possible future transbay bus and ferry deficits--it is essential to know the relationship between benefits received by the counties and costs which they in fact pay. For illustrative purposes, the analysis is made in reference to each of the five alternative toll/fare structures originally suggested in the District's preliminary financial projections.

A. General Methodology

In general outline, the following methodology has been used:

1. The transbay bus and ferry portions of the total operating deficit were determined. It is estimated that 96% of the unfunded bus deficit occurs in inter-county, as opposed to intra-county service. One hundred percent of the ferry deficit occurs in inter-county service.

2. The percentages of the transbay bus and ferry deficits allocable to San Francisco, Marin and Sonoma counties were determined, based on the percentages of patronage generated by residents of each county. Patronage of persons residing in areas other than the three counties was allocated to the three counties based on their proportionate shares. The data was generated through comprehensive surveys of both systems designed specifically for this study. For the bus system, each county share was determined by passenger miles. For the ferry system, the criterion was passengers.

3. The deficits attributable to the three counties were credited by the amounts of surplus bridge tolls contributed by each county. These amounts were determined by a series of license plate counts at the toll plaza. The percentages of vehicles from the various counties were applied to surplus revenues (amounts above those required for operation and maintenance of the Bridge.

4. The TDA and UMTA Section 5 operating assistance funds contributed by each county for transbay service were credited.

5. The above calculations resulted in a net deficit figure for each county primarily served by the systems.

6. The above calculations were applied to each of the five alternative toll/fare structures shown in the District's preliminary financial projections to show the estimated relationship between the benefit distribution among the counties and their payments toward system costs. It should be noted, however, that since it was desirable to show the true operating deficit, depreciation was included in the operating deficit calculations. In the financial projections a reserve is shown for depreciation; hence depreciation is not reflected in the bus and ferry transit operations projections. Consequently, the net deficit figures shown in the projections which follow would be reduced by the annual amounts of depreciation that are in funded reserves.

B. Bus Patronage Survey

Since no earlier bus patronage survey had determined the counties of residence of inter-county bus passengers, a survey was designed in conjunction with staff for the purpose of this study.

Between Friday, July 29 and Thursday, August 11, 1977, questionnaires were completed by passengers on 117 bus trips. In all cases, one surveyor rode the entire length of the trip asking almost all passengers to complete questionnaires. All members of groups were encouraged to participate as were literate children, elders and tourists. However, passengers were not asked to fill out a second questionnaire on later trips.

While an attempt was made to survey an equal sample from all routes and time periods, passenger response varied by route and time period; commuters were generally most cooperative, while passengers on evening basic service were least cooperative. Therefore, responses from each time period were weighted to represent gross patronage as experienced in June 1977.

To date, three pieces of information have been developed from the completed questionnaires: 1) the counties of residence of revenue passengers for each of the six trip types (Sonoma Local, Marin Local, San Francisco Local, Sonoma-Marin, Sonoma-San Francisco, Marin-San Francisco); 2) the average journey length (total trip length from the stop at which the first GGT bus was boarded to the stop at which the trip on GGT ended) for passengers residing in each county for each of the 6 trip types; and 3) annualized passenger miles.

Counties of Residence of Revenue Passengers

The first question asked on the questionnaire was "Where do you live? (County) ________________". The third question asked respondents to identify the bus stops where their trip began and ended; this was used to identify the trip type which was then coded on each questionnaire. Trip types were validated by question 2 which asked how much fare was paid.

Because the sample size varied from one time period to the next in terms of the number of trips surveyed, and because passengers' response rate also varied by time period, responses were weighted to represent gross patronage, by time period, in June 1977. that is, six matrices were developed, one for each time period (A.M. Off-Peak, A.M. Peak, Midday, P.M. Peak, P.M. Off-Peak, and Weekend) showing the number of responses from each county for each trip type. Each matrix was then adjusted to represent the average daily revenue patronage in June 1977 (weekends included in "average daily").

This adjustment or weighting was accomplished by multiplying the number of responses (from a given county of residence, traveling a given trip type during a given time period) by the gross average daily patronage (for that trip type and that time period) and dividing by the number of responses (for that trip type and time period). That number was then adjusted to revenue passengers by multiplying it by the fraction of revenue passengers for that trip type and time period. The fraction of revenue passengers was determined by the response to question 2; those boarding with transfers and passes being counted as non-revenue passengers.

The six matrices were added together to represent the whole average day on one matrix which was then multipled by 30 to represent total revenue patronage in June. Finally, the June matrix was annualized, taking into account June's average proportion of annual patronage from 1973, 1974 and 1975. This final matrix follows:

Table 1

ANNUALIZED REVENUE PATRONAGE BY COUNTY OF RESIDENCE AND TRIP TYPE

		TRIP TYPE						
RESIDENCE		Sonoma Local	Marin Local	San Francisco Local	Sonoma/ Marin	Sonoma/ San Francisco	Marin/ San Francisco	Total
Marin	#	4,522	2,357,803	35,422	21,479	26,755	3,752,814	6,198,795
	%	0.05	25.54	0.38	0.23	0.29	40.66	67.15
San Francisco	#	1,130	17,334	15,073	0	63,684	591,994	689,215
	%	0.01	0.18	0.16	0.00	0.69	6.41	7.47
Sonoma	#	351,956	43,712	0	75,742	910,789	38,436	1,420,635
	%	3.81	0.47	0.00	0.82	9.87	0.42	15.39
Other	#	41,828	260,387	39,190	16,204	133,397	430,713	921,719
	%	0.45	2.82	0.42	0.18	1.45	4.67	9.99
Total	#	399,436	2,679,236	89,685	113,425	1,134,625	4,813,957	9,230,364
	%	4.33	29.03	0.97	1.23	12.29	52.15	100.00

Average Journey Length by County of Residence and Trip Type

Golden Gate transit's service area has been divided into 78 "analysis zones" and a matrix showing the average mileage from each zone to each other zone has been developed. Surveyors coded the questionnaires with the zones in which the respondent got on and off the bus. This information was used to develop average trip lengths for each route. Another set of zone numbers, based on question #3, was coded on each questionnaire showing the beginning and ending points of the passenger's total trip on GGT (journey length as opposed to trip length).

As with the county of residence analysis, the results of the average journey length study were weighted to account for variations in the sample size from one time period to the next.

Again six matrices were developed, one for each time period showing the average journey length by county of residence and by trip type. The average journey length (for a given county of residence, with a given trip type, during a given time period) was multiplied by the average daily gross patronage (for that time period and trip type). The sum of these products for all time periods was then divided by the average daily gross patronage for all time periods for which there were responses.

The result of this calculation is the following matrix of average journey lengths by county of residence and by trip type.

Table 3

AVERAGE JOURNEY LENGTH (in miles) BY RESIDENCE AND TRIP TYPE

RESIDENCE	TRIP TYPE Sonoma Local	Marin Local	San Francisco Local	Sonoma/ Marin	Sonoma/ San Francisco	Marin San Francisco	Total
Marin	11.720	7.079	5.169	29.746	49.776	18.824	14.445
San Francisco	2.200	5.259	5.374	*	52.147	13.633	16.782
Sonoma	11.847	16.847	*	29.258	49.890	31.726	34.403
Other	9.553	6.139	6.400	29.343	52.845	15.764	15.802
Average - weighted	11.597	7.135	5.741	29.363	50.361	18.015	16.003

*There were no responses in these categories

Annualized Passenger Miles

The average journey length totals for each trip type and for each county of residence were also weighted. The average journey length was multiplied by the corresponding number of revenue passengers to yield the following table of Annualized Passenger Miles by county of residence and by trip type. The total passenger miles for each county of residence and for each trip type were then divided by the corresponding total number of revenue passengers to yield the appropriate total average journey lengths.

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	Average		48.5	6.9	5.6	19.6	19.4	100.0	1629
Week-end	Saturday	7-23	37.4	11.9	5.4	22.4	23.0	100.1	875
	Sunday	7-24	36.6	14.6	6.6	26.7	15.5	100.0	618
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In distributing questionnaries on the Larkspur Ferries almost all passengers were approached. All members of groups were encouraged to participate as were literate childred, elders and tourists. However, passengers were not asked to fill out a second questionnaire on later trips. Response was excellent.

If the July survey's residence distribution is taken to represent the three summer months and the February and March distribution to represent the other nine months, and percentages for all time periods are multiplied by their respective estimated patronage, the following distribution results:

Table 5

ANTICIPATED SUMMER PATRONAGE - LARKSPUR FERRY

JUNE-AUGUST (based on July survey)		Marin	San Francisco	Sonoma	Other California	Out of State	Total
A.M. Peak	% from survey	90.5	0.7	1.9	1.4	5.6	100.1
	% x projected patronage	89,142	690	1,872	1,379	5,516	98,599
P.M. Peak	% from survey	78.1	3.8	2.6	6.8	8.7	100.0
	% x projected patronage	82,396	4,009	2,743	7,174	9,178	105,500
Off-Peak	% from survey	48.5	6.9	5.6	19.6	19.4	100.0
	% x projected patronage	113,631	16,166	13,120	45,921	45,452	234,290
Week-end	% from survey	37.0	13.0	5.9	24.2	19.9	100.0
	% x projected patronage	51,615	18,135	8,230	33,759	27,760	139,499
Summer Total	sum of projected patronage	336,784	39,000	25,965	88,233	87,906	527,888
	%	58.3	6.7	4.5	15.3	15.2	100.0

Table 6

ANTICIPATED WINTER PATRONAGE-LARKSPUR FERRY

SEPTEMBER-MAY (based on February and March surveys)		Marin	San Francisco	Sonoma	Other California	Out of State	Total
A.M. Peak	% from survey	98.0	0.0	1.1	0.5	0.4	100.0
	% x projected patronage	325,928	-	3,658	1,663	1,330	332,579
P.M.	% from survey	98.7	0.65	0.0	0.0	0.65	100.0
	% x projected patronage	347,394	2,288	-	-	2,288	351,970
Off-Peak	% from survey	59.7	14.9	3.6	14.1	7.7	100.0
	% x projected patronage	201,123	50,197	12,128	47,500	25,941	336,889
Week-End	% from survey	54.0	17.5	4.2	21.7	2.6	100.0
	% x projected patronage	211,302	68,478	16,435	84,912	10,174	391,301
Winter Total	sum of projected patronage	1,085,747	120,963	32,221	134,075	39,733	1,412,739
	%	76.9	8.6	2.3	9.5	2.8	100.1

Table 7

ANTICIPATED ANNUAL PATRONAGE--LARKSPUR FERRY

		Marin	San Francisco	Sonoma	Other California	Out of State	Total
Annual Total	sum of projected patronage	1,422,531	159,963	58,186	222,308	127,639	1,990,627
	%	71.5	8.0	2.9	11.2	6.4	100.0

The variation in Marin's proportion from winter to summer may not be entirely seasonal; it is likely that many local residents, having prior knowledge of the new ferry system, were the first to take pleasure rides.

Table 8

COUNTIES OF RESIDENCE OF SAUSALITO FERRY PASSENGERS, JULY 1977

	Marin	San Francisco	Sonoma	Other California	State	Total	Sample Size
A.M. Peak	98.3	1.7	-	-	-	100.0	57
P.M. Peak	58.2	3.9	-	8.8	29.1	100.0	155
Off-Peak	8.3	11.9	0.3	27.6	51.8	99.9	1005
Weekend	4.6	15.4	1.0	32.1	46.9	100.0	534

Because the proportion of passengers in each time period fluctuates seasonally, the weighted responses from which the above percentages were derived cannot simply be summed. Therefore, the total number of passengers anticipated annually in each time period was developed (based on 1976 patronage with 1975 data substituted for April, May and June to eliminate the effect of the 1976 bus strike). The annual counts for each time period were then multiplied by the percentages from each county during the respective time periods. This process yields the following table of anticipated annual patronage from each county in each time period.

Table 9

ANTICIPATED ANNUAL PATRONAGE - SAUSALITO FERRY

	Marin	San Francisco	Sonoma	Other California	Out of State	Total
A.M. Peak	52,350	905	-	-	-	53,255
P.M. Peak	59,897	4,014	-	8,851	29,949	102,711
Off-Peak	44,518	63,827	1,609	148,036	277,834	535,824
Weekend	18,365	61,483	3,992	128,156	187,245	399,241
Total	175,130	130,229	5,601	285,043	495,028	1,091,031
Overall Annual %	16.1	11.9	0.5	26.1	45.4	100.0

While these percentages do take into account seasonal variations in overall patronage for each time period, they do not account for any seasonal variation in counties of residences. There is no information on which to base an estimate of such variation.

Table 10

COMBINED LARKSPUR AND SAUSALITO HOME ORIGINS

To determine percentages of passengers' counties of residence for the District's entire ferry operation, the projected volumes from each county for each ferry route are simply added together and new percentages figured from the totals.

	Marin	San Francisco	Sonoma	Other California	Out of State	Total
Larkspur	1,422,531	159,963	58,186	222,308	127,639	1,990,627
Sausalito	175,130	130,229	5,601	285,043	495,028	1,091,031
Total	1,597,661	290,192	63,787	507,351	622,667	3,081,658
%	51.8	9.4	2.1	16.5	20.2	100.0

D. County Shares of Transbay Bus and Ferry Deficits

The allocations of the operating deficits for transbay bus and ferry service among the counties served by the systems--including proportionate allocation to those counties of patronage generated by occasional riders from other areas--is as follows:

	Bus	Ferry
Marin	54%	85%
Sonoma	37%	-
San Francisco	9%	15%

Table 11, which follows, illustrates the distribution of the transbay bus and ferry operating deficits which would occur if costs were related to benefits as represented by the above percentages. The table shows application to the "base case" deficits; i.e., the deficits as presently projected without any toll/fare raise. Also, the deficits shown are operating deficits and do not reflect the counties' TDA, Section 5 and contract payments.

Table 11

COUNTY SHARES OF TRANSIT DEFICIT
(Base Case Illustration)

	FY 1977-78		FY 1978-79		FY 1979-80		FY 1980-81		FY 1981-82	
	BUS	FERRY	BUS	FERRY	BUS	FERRY	BUS	FERRY	BUS	FERRY
Total Transbay Operating Deficits	9,139,296	3,471,900	10,047,936	4,001,500	10,868,256	4,328,500	11,757,894	4,689,300	12,709,248	5,065,300
Deficit Allocation To Counties										
Marin										
Bus 54%	4,935,220		5,425,885		5,868,858		6,349,311		6,862,994	
Ferry 85%		2,951,115		3,401,275		3,679,225		3,985,905		4,305,505
Total Bus & Ferry		7,886,335		8,827,160		9,548,083		10,335,216		11,168,499
San Francisco										
Bus 9%	822,537		904,314		978,143		1,058,219		1,143,832	
Ferry 15%		520,785		600,225		649,275		703,395		759,795
Total		1,343,322		1,504,539		1,627,418		1,761,614		1,903,627
Sonoma										
Bus 37%	3,381,540		3,717,736		4,021,255		4,350,454		4,702,422	
Ferry		-		-		-		-		-
Total		3,381,540		3,717,736		4,021,255		4,350,454		4,702,422

E. Allocation of Surplus Tolls

Surplus bridge tolls have been allocated to the three counties served by the transit systems as credits against their portions of the operating deficits. The figures used in this analysis have been taken from the preliminary financial projections. The surplus consists of the figures for Bridge operations, plus the portion of a toll/fare increase represented by increased tolls only, less Bridge major repairs and replacement.

The allocation of the surplus tolls was determined by a series of license plate counts at the toll plaza. First, surplus tolls paid by vehicles not registered in Marin, Sonoma or San Francisco counties were allocated to the bridge for future improvements. This was done on the theory that residents of such other areas are not primary beneficiaries of the transit systems, and hence it would be a convenient, and equitable, allocation procedure to allocate such funds for Bridge purposes. Second, surplus tolls paid by vehicles registered in the three counties were allocated to the counties as credits against their allocated deficits.

Table 12 shows the results of the license plate surveys upon which the allocations were based.

Table 12

Results of License Plate Surveys

	Marin	S.F.	San Mateo	Sonoma	Other Calif.	Out of State	TOTAL
Commute 6-10 A.M.							
March 1977	64.1	11.4	2.7	9.3	9.9	2.6	100%
Feb. 1977	64.6	12.4	3.2	8.0	7.5	4.3	100%
Oct. 1975	65.0	10.9	4.0	6.9	9.1	4.1	100%
Weekday							
March 1977	48.4	16.9	7.1	8.5	14.6	4.5	100%
Feb. 1977	50.2	17.7	6.5	7.8	12.0	5.8	100%
Oct. 1975	46.5	16.9	7.8	7.4	15.0	6.4	100%
Saturday, March 26							
March 1977	32.6	21.7	11.9	8.7	21.6	3.5	100%
Feb. 1977	34.5	20.9	10.3	8.9	18.5	6.9	100%
Oct. 1975	29.9	23.7	9.9	7.9	20.7	7.9	100%
Sunday, March 27							
March 1977	21.6	29.8	16.5	6.0	21.6	4.5	100%
Feb. 1977	25.4	29.1	13.3	5.5	21.1	5.6	100%
Oct. 1975	24.6	26.1	14.3	4.5	22.2	8.3	100%
OVERALL							
March 1977	42.6	19.3	9.0	8.2	16.5	4.4	100%
Feb. 1977	47.0	18.9	7.3	7.7	13.2	5.9	100%
Oct. 1975	41.6	19.0	8.8	7.1	16.7	6.8	100%
AVERAGE	43.8	19.1	8.3	7.6	15.[illegible]	5.7	100%
Weekday range for the 5 days in March	47.7- 48.7	16.2- 17.9	6.2- 7.9	7.8- 9.1	12[illegible] 15[illegible]	2.9- 6.2	

Note: Percentages for all three surveys have been weighted to account for variations in traffic volume from hour to hour. Sample sizes for each survey were as follows: March 1977 - 28,240; February 1977 - 8,751; October 1975 - 7,085. In order to gauge the need to survey all five weekdays, the high and low values for each county are also presented.

When the tolls paid by vehicles not registered in one of the three counties primarily benefited by the transit systems are allocated to the Bridge, the following percentage allocation results:

Marin	43.8%
Sonoma	7.6%
San Francisco	19.1%
Bridge	29.5%

F. Results of the Allocation Process

The process described above has been applied to the five basic fare/toll alternatives contained in the District's preliminary financial projections. The results are shown in Tables 13 through 17, which follow:

Table 13

ALTERNATE I

$1.00 Toll - 20% Discount

$2.25 Fare - 20% Discount

	FY 77-78	FY 78-79	FY 79-80	FY 80-81	FY 81-82
Bridge Tolls w/o Increase	13,302,400	13,550,000	13,910,000	14,180,000	14,490,000
New Tolls	3,270,000	350,000	3,430,000	3,500,000	3,580,000
Total Toll Revenue	16,572,400	16,900,000	17,340,000	17,680,000	18,070,000
Bridge Expense	(8,156,000)	(8,405,500)	(9,071,800)	(8,071,800)	(8,479,700
Bridge Surplus	8,416,400	8,494,500	8,268,200	9,608,200	9,590,300
Allocation of Surplus					
Bridge	2,482,838	2,505,878	2,439,119	2,834,419	2,829,138
Marin (transit)	3,686,383	3,720,591	3,621,471	4,208,391	4,200,552
Sonoma (transit)	641,464	645,582	628,320	730,223	728,863
S.F. (transit)	1,607,532	1,622,450	1,579,226	1,835,166	1,831,747
ransbay Operating Deficit					
Bus	8,673,696	9,460,416	10,253,856	11,143,584	12,075,648
Ferry	2,965,300	3,511,500	3,818,500	4,179,300	4,545,300
Total Operating Deficit	(11,638,996)	(12,971,916	(14,072,356)	(15,322,884)	(16,620,948
arin Deficit Share					
Deficit	(7,204,301)	(8,093,400)	(8,782,807)	(9,569,940)	(10,384,354
TDA & Section 5	1,680,000	1,742,208	1,867,776	1,944,864	2,019,008
Toll Contribution	3,686,383	3,720,591	3,621,471	4,208,391	4,200,552
Net Deficit	(1,837,918)	(2,630,601)	(3,293,560)	(3,416,685)	(4,164,794
onoma Deficit Share					
Deficit	(3,209,268)	(3,500,354)	(3,793,927)	(4,123,126)	(4,467,990
TDA & Section 5	807,200	843,882	907,704	942,043	977,957
Toll Contribution	641,464	645,582	628,320	730,223	728,863
Net Deficit	(1,760,604)	(2,010,890)	(2,257,903)	(2,450,860)	(2,761,170
an Francisco Deficit Share					
Deficit	(1,225,428)	(1,378,162)	(1,495,622)	(1,629,818)	(1,768,603
TDA & Section 5	138,300	136,110	145,920	151,943	157,735
Toll Contribution	1,607,532	1,622,450	1,579,226	1,835,166	1,831,747
Net Surplus	520,404	380,398	229,524	357,291	220,879

OTE: See Table 11 for basis for computing each county's share of deficit.

Table 14

ALTERNATE II

$1.00 Toll

$2.25 Fare - 20% Discount

	FY 77-78	FY 78-79	FY 79-80	FY 80-81	FY 81-82
Bridge Tolls w/o Increase	13,302,400	13,550,000	13,910,000	14,180,000	14,490,000
New Tolls	4,350,000	4,460,000	4,560,000	4,660,000	4,760,000
Total Toll Revenue	17,652,400	18,010,000	18,470,000	18,840,000	19,250,000
Bridge Expense	(8,156,000)	(8,405,500)	(9,071,800)	(8,608,200)	(9,590,300
Bridge Surplus	9,496,400	9,604,500	9,398,200	10,231,800	9,659,700
Allocation of Surplus					
Bridge	2,801,438	2,833,328	2,772,469	3,018,382	2,849,612
Marin (transit)	4,159,423	4,206,771	4,116,412	4,481,528	4,230,948
Sonoma (transit)	721,726	729,942	714,263	777,616	734,137
S.F. (transit)	1,813,811	1,834,460	1,795,056	1,954,274	1,845,003
Transbay Operating Deficit					
Bus	8,587,296	9,374,016	10,177,056	11,047,584	11,998,848
Ferry	2,935,300	3,481,500	3,808,500	4,139,300	4,495,300
Total Operating Deficit	(11,522,596)	(12,855,516)	(13,985,556)	(15,186,884)	(16,494,148
Marin Deficit Share					
Deficit	(7,132,145)	(8,021,244)	(8,732,835)	(9,484,100)	(10,300,383
TDA & Section 5	1,680,000	1,742,208	1,867,776	1,944,864	2,019,008
Toll Contribution	4,159,423	4,206,771	4,116,412	4,481,528	4,230,948
Net Deficit	(1,292,722)	(2,072,265)	(2,748,647)	(3,057,708)	(4,050,427
Sonoma Deficit Share					
Deficit	(3,177,300)	(3,468,386)	(3,765,511)	(4,087,606)	(4,439,574
TDA & Section 5	807,200	843,882	904,704	942,043	977,957
Toll Contribution	721,726	729,942	714,263	777,616	734,137
Net Deficit	(1,648,374)	(1,894,562)	(2,146,544)	(2,367,947)	(2,727,480
San Francisco Deficit Share					
Deficit	(1,213,152)	(1,365,886)	(1,487,210)	(1,615,178)	(1,754,19
TDA & Section 5	138,300	136,110	145,920	151,943	157,73
Toll Contribution	1,813,811	1,834,460	1,795,056	1,954,274	1,845,00
Net Surplus	738,959	604,684	453,766	491,039	248,54

Table 15

ALTERNATE III

$1.00 Toll

$2.00 Fare - 10% Discount

	FY 77-78	FY 78-79	FY 79-80	FY 80-81	FY 81-82
Bridge Tolls w/o Increase	13,302,400	13,550,000	13,910,000	14,180,000	14,490,000
New Tolls	4,420,000	4,520,000	4,630,000	4,730,000	4,830,000
Total Toll Revenue	17,722,400	18,070,000	18,540,000	18,910,000	19,320,000
Bridge Expense	(8,156,000)	(8,405,500)	(9,071,800)	(8,608,200)	(9,590,300
Bridge Surplus	9,566,400	9,664,500	9,468,200	10,301,800	9,729,700
Allocation of Surplus					
Bridge	2,822,088	2,851,028	2,793,119	3,039,032	2,870,262
Marin (transit)	4,190,083	4,233,051	4,147,072	4,512,188	4,261,608
Sonoma (transit)	727,046	734,502	719,583	782,936	739,457
S.F. (transit)	1,827,183	1,845,920	1,808,426	1,967,644	1,858,373
Transbay Operating Deficit					
Bus	8,356,896	9,134,016	9,917,856	10,797,984	11,730,048
Ferry	2,875,300	3,421,500	3,718,500	4,079,300	4,435,300
Total Operating Deficit	(11,232,196)	(12,555,516)	(13,636,356)	(14,877,284)	(16,165,348
Marin Deficit Share					
Deficit	(6,956,729)	(7,840,644)	(8,516,367)	(9,298,316)	(10,104,231
TDA & Section 5	1,680,000	1,742,208	1,867,776	1,944,864	2,019,008
Toll Contribution	4,190,083	4,233,051	4,147,072	4,512,188	4,261,608
Net Deficit	(1,086,646)	(1,865,385)	(2,501,519)	(2,841,264)	(3,823,615
Sonoma Deficit Share					
Deficit	(3,092,052)	(3,379,586)	(3,669,607)	(3,995,254)	(4,340,118
TDA & Section 5	807,200	843,882	904,704	942,043	977,957
Toll Contribution	727,046	734,502	719,583	782,936	739,457
Net Deficit	(1,557,806)	(1,801,202)	(2,045,320)	(2,270,275)	(2,622,704
San Francisco Deficit Share					
Deficit	(1,183,415)	(1,335,286)	(1,450,382)	(1,583,714)	(1,720,999
TDA & Section 5	138,300	136,110	145,920	151,943	157,735
Toll Contribution	1,827,183	1,845,920	1,808,426	1,967,644	1,858,373
Net Surplus	782,068	646,744	503,964	535,873	295,109

Table 16

ALTERNATE IV

$1.00 Toll - 10% Discount

$2.25 Fare - 10% Discount

	FY 77-78	FY 78-79	FY 79-80	FY 80-81	FY 81-82
Bridge Tolls w/o Increase	13,302,400	13,550,000	13,910,000	14,180,000	14,490,000
New Tolls	4,060,000	4,160,000	4,250,000	4,350,000	4,440,000
Total Toll Revenue	17,362,400	17,710,000	18,160,000	18,530,000	18,930,000
Bridge Expense	(8,156,000)	(8,405,500)	(9,071,800)	(8,608,200)	(9,590,300
Bridge Surplus	9,206,400	9,304,500	9,088,200	9,921,800	9,339,700
Allocation of Surplus					
Bridge	2,715,888	2,744,828	2,681,019	2,926,932	2,755,212
Marin (transit)	4,032,403	4,075,371	3,980,632	4,345,748	4,090,788
Sonoma (transit)	699,686	707,142	690,703	754,056	709,817
S.F. (transit)	1,758,423	1,777,160	1,735,846	1,895,064	1,783,883
Transbay Operating Deficit					
Bus	8,424,096	9,210,816	10,004,256	10,884,384	11,797,248
Ferry	3,895,300	3,421,500	3,728,500	4,079,300	4,445,300
Total Operating Deficit	(12,319,396)	(12,632,316)	(13,732,756)	(14,963,684)	(16,242,548
Marin Deficit Share					
Deficit	(7,860,017)	(7,882,116)	(8,571,523)	(9,344,972)	(10,149,019
TDA & Section 5	1,680,000	1,742,208	1,867,776	1,944,864	2,019,008
Toll Contribution	4,032,403	4,075,371	3,980,632	4,345,748	4,090,788
Net Deficit	(2,147,614)	(2,064,537)	(2,723,115)	(3,054,360)	(4,039,223
Sonoma Deficit Share					
Deficit	(3,116,916)	(3,408,002)	(3,701,575)	(4,027,222)	(4,364,982
TDA & Section 5	807,200	843,882	904,704	942,043	977,957
Toll Contribution	699,686	707,142	690,703	754,056	709,817
Net Deficit	(1,610,030)	(1,856,978)	(2,106,168)	(2,331,123)	(2,677,208
San Francisco Deficit Share					
Deficit	(1,342,464)	(1,342,198)	(1,459,658)	(1,591,490)	(1,728,547
TDA & Section 5	138,300	136,110	145,920	151,943	157,735
Toll Contribution	1,758,423	1,777,160	1,735,846	1,895,064	1,783,883
Net Surplus	554,259	571,072	422,108	455,517	213,071

Table 17

ALTERNATE V

$1.00 Toll - No Discount

$2.25 Fare - 10% Discount

	FY 77-78	FY 78-79	FY 79-80	FY 80-81	FY 81-82
Bridge Tolls w/o Increase	13,302,400	13,550,000	13,910,000	14,180,000	14,490,000
New Tolls	4,430,000	4,500,000	4,650,000	4,750,000	4,850,000
Total Toll Revenue	17,732,400	18,050,000	18,560,000	18,930,000	19,340,000
Bridge Expense	(8,156,000)	(8,405,500	(9,071,800)	(8,608,200)	(9,590,300
Bridge Surplus	9,576,000	9,644,500	9,488,200	10,321,800	9,749,700
Allocation of Surplus					
Bridge	2,824,920	2,845,128	2,799,019	3,044,932	2,876,162
Marin (transit)	4,194,288	4,224,291	4,155,832	4,520,948	4,270,368
Sonoma (transit)	727,760	732,982	721,103	784,456	740,977
S.F. (transit)	1,829,016	1,842,100	1,812,246	1,971,464	1,862,193
Transbay Operating Deficit					
Bus	8,270,496	9,038,016	9,831,456	10,701,984	11,634,048
Ferry	2,875,300	3,421,500	3,718,500	4,079,300	4,435,300
Total Operating Deficit	(11,145,796)	(12,459,516)	(13,549,956)	(14,781,284)	(16,069,348
Marin Deficit Share					
Deficit	(6,910,073)	(7,788,804)	(8,469,711)	(9,246,476)	(10,052,39
TDA & Section 5	1,680,000	1,742,208	1,867,776	1,944,864	2,019,008
Toll Contribution	4,194,288	4,224,291	4,155,832	4,520,948	4,270,368
Net Deficit	(1,035,785)	(1,822,305)	(2,446,103)	(2,780,664)	(3,763,01
Sonoma Deficit Share					
Deficit	(3,060,084)	(3,344,066)	(3,637,639)	(3,959,734)	(4,304,598
TDA & Section 5	807,200	843,882	904,704	942,043	977,95
Toll Contribution	727,760	732,982	721,103	784,456	740,97
Net Deficit	(1,525,124)	(1,767,202)	(2,011,832)	(2,233,235)	(2,585,66
San Francisco Deficit Share					
Deficit	(1,175,639)	(1,326,646)	(1,442,606)	(1,575,074)	(1,712,35
TDA & Section 5	138,300	136,110	145,920	151,943	157,73
Toll Contribution	1,829,016	1,842,099	1,812,246	1,971,464	1,862,19
Net Surplus	791,677	651,563	515,560	548,333	307,56

V. SOURCES OF NEW FUNDS

Any discussion of generation of new revenues, quite apart from the question of a toll/fare raise, is bound to elicit a large measure of adverse public reaction. The District's situation in this regard is no different from that of public agencies throughout the country which are committed to provide public services during a period of continually rising costs. However, since the District is a special purpose agency, and not a part of a larger general purpose government, its financial problems generate greater public awareness, and often greater hostility, than would be the case if it were a county or city agency. Taxpayers, already heavily burdened by taxes paid to cities, counties, states and the federal government, resent the need to pay still further for the costs of services provided by special Districts. While a city or county department has to compete for general fund revenues primarily within the confines of a professional bureaucracy, the District's effort to keep revenues equal to costs must be waged wholly in the public arena. In such a context, necessary efforts to raise additional public revenues always have been, and always will be politically difficult. That difficulty is exacerbated by the fact that the District has no tax base of its own, the toll booth notwithstanding.

Nonetheless, financial responsibility requires that the need to generate additional immediate revenues--and the possible need to generate still more revenues in the future, whether through tolls and fares or through local taxes--be faced; the alternative is a sharp reduction in transit services. Whether such present, and possibly

future, revenues are to be derived exclusively from tolls and fares, or whether they require a future call on local taxes, it is pertinent to inquire as to the importance placed by the various counties on transit relative to their other costly programs.

In that regard, it is important to recall that the original plan which was the genesis of the present bus system, the Optimum Bus Plan, was designed primarily by the Marin County Transit District. Transbay bus service was implemented in direct response to long-standing political initiatives originating primarily in Marin County. Concurrent development of the ferry system was the result of political initiatives originating in San Francisco. Development of each system was explicitly tied by the District's directors to development of the other. As the bus system has developed, Sonoma County residents have become heavy users of transbay service.

Hence, the systems are in place. Whether they will operate in the future at their intended levels of service, or whether service will be reduced as an alternative to the generation of new revenues, will depend ultimately on what priority each of the counties gives transit in the context of other locally funded government programs. For the ultimate question relates to the affected counties' ability and willingness to pay for services.

In this regard, an analysis has been made of the degree of financial commitment which five Bay Area Counties have made to transit by comparing funds which they spend for transit with total government expenditures in the counties. Tables 18 through 22 show the percentages of consolidated government budgets spent for transit in Contra Costa, Alameda, San Francisco, Marin and Sonoma Counties.

Table 18

CONTRA COSTA COUNTY

Estimated Expenditures of Residents for Government Services

1976-77

General County	$ 219,300,000
Special Districts under Board of Supervisors	34,206,605
Other Special Districts	22,160,516
School Districts	297,435,389
BART Taxes	28,911,118
A/C Transit Taxes	3,483,888
BART TDA	1,539,779
A/C Transit TDA	2,035,564
Total Estimated Expenditures	609,072,859
Total for Transit	35,970,349
Transit % of Total Govt. Expenditures:	6%

Table 19

ALAMEDA COUNTY

Estimated Expenditures of Residents For Government Services

1976-77

General County	$ 394,089,890
Special Districts under Board of Supervisors	26,918,597
Other Special Districts	63,956,530
Schools	472,028,253
BART Taxes	44,171,330
A/C Transit Taxes	17,284,728
BART TDA	2,676,226
A/C Transit TDA	7,125,097
Total Estimated Expenditures	1,028,250,651
Total for Transit	71,257,381
Transit % of Total Govt. Expenditures:	7%

Table 20

MARIN COUNTY

Estimated Expenditures of Residents for Government Services

1976-77 –

Estimated Cost of all Govt. Expenses* (excluding transit)	$312,278,470
Marin Transit District	600,000
GGBHTD - TDA	1,570,597
GGB Tolls (43% of Bridge Surplus)	2,254,123
Total Estimated Expenditures	316,703,190
Total for Transit	4,424,720
Transit % of Total Govt. Expenditures:	1.40%

*Note: Of all the counties studied, only Marin does not compile a report of the budgets of all special districts and local governments within the County. According to the auditor/controller, such information is not centrally available. Hence it was necessary to calculate a very rough estimate based on earlier available data. In 1974, a study was conducted for the County of the Economic Impact of its General Plan. The budgets of all local governments and special districts were analyzed and their costs projected to 1980 under three alternative growth scenarios. Under the County General Plan Scenario, total government costs in 1980 were projected at $225,000,000 in 1970 dollars. For the purpose of this report, that figure has been inflated at the rate of 6% per year for seven years to give a more realistic estimate of the projection in current dollars. That assumed rate of budget growth, however, is extremely conservative compared to actual inflation rates that occurred during much of the period. Hence, it is almost certain that actual total government costs in Marin in fiscal 1976-77 were substantially more than $312,278,470. However, since precise figures were unavailable, fairness required an approach which would underestimate, rather than overestimate, Marin's total cost of government. A low estimate raises the percent of the assumed total cost which is paid for transit (transit costs are actual). Because total government costs are believed to be understated, it is probable that the percentage paid for transit is even lower than indicated in the table.

Table 21

SAN FRANCISCO COUNTY

Estimated Expenditures of Residents for Government Services

1976-77

Consolidated City and County (less Municipal Railway)	$ 689,575,114
School District	207,996,522
BART Taxes	35,844,062
Municipal Railway	79,061,637
GGBHTD TDA	129,240
BART TDA	1,950,000
A/C Transit TDA	150,257
GGB Tolls (19.1% of bridge surplus)	982,962
Total Estimated Expenditures	1,015,689,794
Total for Transit	118,118,158
Transit % of Total Govt. Expenditures:	12%

Table 22

SONOMA COUNTY

Estimated Expenditures of Residents for Government Services

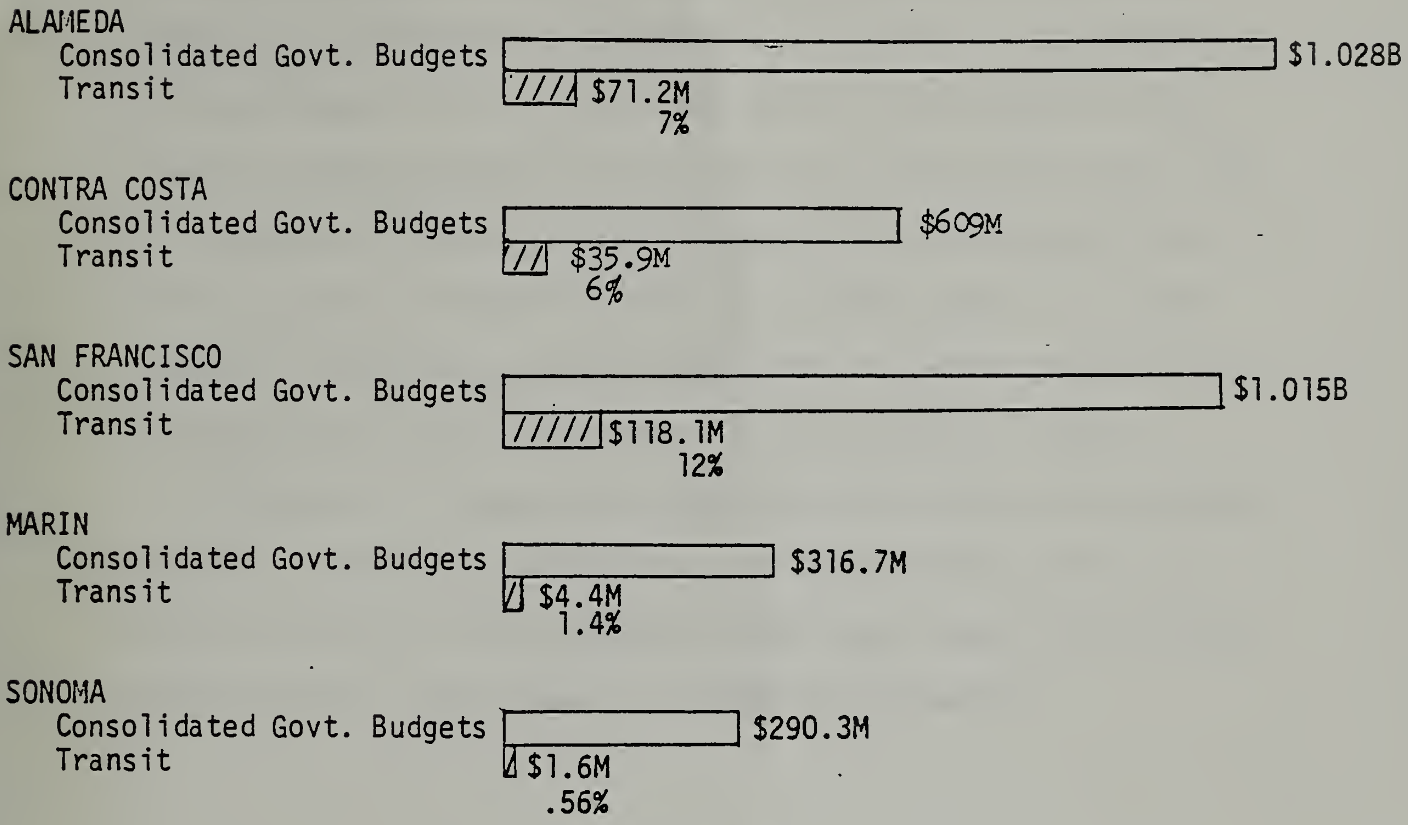
1976-77

General County	$ 84,334,570
Special Districts under Board of Supervisors	13,859,750
Other Special Districts	6,885,890
School Districts	140,892,793
Cities	44,315,741
GGBHTD - TDA	621,323
GGB Tolls (7.6% of bridge surplus)	391,126
Santa Rosa Municipal Transit	604,300
Healdsburg	14,000
Total Estimated Expenditures	291,919,493
Total for Transit	1,630,749
Transit % of Total Government Expenditures:	.56%

Table 23 shows the comparative results of this analysis graphically. It should be noted, as indicated on the tables, that all data are not strictly comparable. However, it is believed that, for the purposes of general comparison, sufficient data was available to provide an instructive comparison.

Table 23

COMPARATIVE 1976-77 EXPENDITURES OF RESIDENTS OF COUNTIES FOR TRANSIT AS PERCENTAGES OF TOTAL GOVERNMENT EXPENDITURES



Note: Consolidated government budgets for Sonoma, Marin and San Francisco consist of budgets of all government agencies including city governments, plus the counties' contributions to regional transit. Figures for Alameda and Contra Costa do not include city government budgets. Consequently, the percentages of those counties' costs shown for transit would be reduced if cities were included.

It is plain from the above comparisons that, while Marin and Sonoma Counties have a high patronage demand for transit, their financial priorities do not reflect the degree of commitment to transit made by the other counties. In part, the gap can be attributed to demographic and land use differences which result in different transit requirements. But it also seems plain, in the context of the disparity between benefits received and costs paid, that much of the gap results from the fact that the counties are not paying for the service, whether through the toll booth or other means. (In that regard, it should be noted that the counties' contributions to transit through surplus tolls are included in their respective tables.)

In summary, it appears that there should be room in the affected counties' overall expenditures for government services and for increased shares for transit, whether those shares come from increased tolls and fares, local taxes, or a combination thereof.

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